



**PREVENTION
MANAGEMENT**

Used Oil Management

**Wisconsin Department of Natural Resources
Waste Management Program * PUBL-WA-233 97**

P.O. Box 7921 * Madison, WI * 53707-7921 * 608/266-2111

BACKGROUND

Management of used oil has been a concern for Wisconsin business for a number of years. In 1979, the Wisconsin Legislature enacted a statute to promote recovery of waste engine oil by requiring that municipalities set up collection centers for used oil. In 1989 the Legislature enacted the recycling law. This law recognized the value of used oil and its potential threat to the environment if mismanaged, by prohibiting the disposal of used oil into solid waste landfills or by burning it without energy recovery. In 1992, EPA established comprehensive standards for used oil management which were updated again in 1993. In 1995, the Wisconsin Department of Natural Resources (WDNR) adopted ch. NR 590, Wis. Adm. Code, covering the management of used oil, which is based largely on the Federal Rule 40 CFR Part 279.

USED OIL DEFINITION

Wisconsin statutes define used oil as follows: "Used oil" means any petroleum-derived or synthetic oil which, as a result of use or management, is contaminated. Used oil includes, but is not limited to, the following:

1. Engine, turbine and gear lubricants.
2. Hydraulic fluid, including transmission fluid.
3. Metalworking fluid, including cutting, grinding, machining, rolling, stamping, quenching and coating oils.
4. Insulating fluid or coolant [299.53(1)(a), Stats.]

As used in the statute, the term "coolant" does not include antifreeze. Antifreeze is not an oil and does not meet the definition of used oil.

CONSUMER COLLECTION, STORAGE, AND SIGN POSTING REQUIREMENTS

FOR RETAILERS AND MUNICIPALITIES

Engine oil retailers are required to either provide an engine waste oil collection facility or post a sign indicating the location and hours of operation of the nearest engine waste oil collection facility available to do-it-yourselfers (Section 287.15, Stats. and s. NR 590.21, Wis. Adm. Code). These requirements also specify the minimum numbers of engine waste oil storage/collection facilities for municipalities based on their populations.

Engine waste oil collection and storage points/facilities also have set minimum location, design, and operating standards (sections ILHR 10.33 and NR 590.22, Wis. Adm. Code).

Questions about chapter ILHR 10, Wis. Admin. Code? Contact your Department of Commerce, Environmental & Regulatory Services Storage Tanks Section. Call 608/266-7874 for a referral to your area inspector. Check with your local fire department for local fire safety ordinances.

WASTE MANAGEMENT REQUIREMENTS

Typically recycled used oil is not considered a hazardous waste. Used oil that is recycled in accordance with ch. NR 590 and does not fail the rebuttable presumption (discussed below) is not considered to be a hazardous waste. In most cases, ch. NR 590 prohibits the mixing of used oil with any listed or characteristic hazardous wastes. Used oil that is not recycled must be properly identified as to whether or not it is a hazardous waste before it may be disposed.

The used oil regulations include a provision identified as the ***"rebuttable presumption."*** This states that used oil containing greater than or equal to 1,000 ppm total halogens is presumed to be a hazardous waste because it has been mixed with listed halogenated hazardous waste. Persons may rebut this presumption by demonstrating that the used oil does not contain hazardous waste by using an analytical method such as those found in SW-846, "Test Methods for Evaluating Solid Waste, Physical/Chemical Methods." In the Wisconsin regulations it appears at s. NR 590.11.¹

Should your used oil be identified as hazardous waste, check the requirements for generators, transporters, and recycling, treatment, storage, and disposal facilities (chs. NR 600 to 685, Wis. Adm. Code). Persons who generate solid waste, but not household waste, are required to determine if their waste is hazardous waste [s. NR 610.07(1)(a), 610.08(1)(a) or 615.05(1)(a), or 615.06 Wis. Adm. Code].

The "presumption of recycling" states that it is presumed that used oil will be recycled; used oil that is disposed is not part of this regulation [s. NR 590.04(2)(c)]. However, burning for energy recovery does constitute recycling.

As a result of these two requirements, used oil which is recycled and is not mixed with hazardous waste is exempt from regulation under the Hazardous Waste Management Code [s. NR 605.05(1)(q)]. Used oil which does not meet this exemption (e.g., used oil that is mixed with a listed hazardous waste, or is not recycled) is subject to all applicable solid and/or hazardous waste management requirements.

For additional information on hazardous waste management requirements, contact your Department of Natural Resources (DNR) Hazardous Waste Specialist by calling your Regional office. See [Waste Management Program Contact List](#) for Region locations and telephone

numbers.

SOLID WASTE STORAGE, PROCESSING AND TRANSPORTATION REQUIREMENTS

Persons who manage used oil in compliance with the requirements of ch. NR 590 are exempt from the licensing requirements pertaining to solid waste storage facilities [s. NR 502.05(2)(f)], transfer facilities [ss. NR 502.07(1) and (2m)], processing facilities [s. NR 502.08(2)(f)], or incinerators [s. NR 502.09(2)(d)]. Chapter NR 590 follows the "permit-by-rule" concept - that is, a facility in compliance with all rule requirements is allowed to operate without having to obtain a permit or license. Failure to comply with the rule may void the license or permit exemption. However, transporters of used oil still must obtain a solid waste transportation license (s. NR 502.06). In addition, used oil burners, marketers, and processor/re-refiners subject to subchapters V, VI, and VII of ch. NR 590 must file an annual report (s. NR 590.08). Note that the reporting requirement does not apply to generators who burn their own used oil on-site in relatively small space heaters (s. NR 590.14).

Public access engine waste oil collection tanks, as well as business, institution, and other used oil storage or collection tanks must also meet the requirements in s. ILHR 10, Wis. Adm. Code and NFPA 30. For additional information, contact your Department of Commerce, Environmental Regulatory Services, Storage Tank Section area.

Solid waste transportation and licensing requirements pertain to all nonhazardous used oils, including engine waste oil (ch. NR 502).

Transporters should identify themselves as nonhazardous used oil haulers on the solid waste transportation license application.

For information on restrictions or requirements concerning interstate and international transfers of used oil, other than the solid waste and hazardous waste generator and transportation requirements in the ch. NR 500 and 600 series, Wis. Adm. Code, of the Wisconsin Department of Transportation's Motor Vehicle and Inspection Section at 608/266-0264.

In addition, certain U.S. Department of Transportation requirements apply to spills or discharges of used oil [s. NR 590.06(2)].

Additional information on transportation requirements may be requested by ordering the appropriate Wis. Adm. Codes, using the order form.

OTHER REQUIREMENTS FOR USED OIL BURNING

Persons who manage used oil by burning it for energy recovery are subject to subchapter VI of ch. NR 590. For information on requirements that apply to burning used oil in furnaces, boilers and space heaters, you should refer to the DNR Used Oil Burning fact sheet listed on the attached order form. The Department of Commerce, Environmental Regulatory Services Storage Tank Section administers used oil burner storage tank requirements under ILHR 10, Wis. Adm. Code. The Department of Commerce's Plan Review Bureau provides plan review for installation of heating systems, including storage tank and ventilation requirements for used oil burning. Check with your local fire department for local fire safety ordinances.

Under limited circumstances used oil may be burned in a space heater (s. NR 590.14). Provided

all of the following circumstances are met, used oil generated by a generator may be burned on-site.

- The heater may be designed to have a maximum capacity of 0.5 million Btu/hour.
- The combustion gases must be vented to the air outside the building.
- The heater must be approved by DILHR for the burning of used oil.
- The used oil burned in the heater must not be hazardous waste according to the rebuttable presumption.
- The used oil burned in the heater must also not exceed the specification levels for flash point and total halogens in s. NR 590.09.

Subject to these same conditions listed above, used oil collected by a generator from consumers may be burned by a generator on-site.

For information on DNR air emission limits for burning used oil for energy recovery (i.e., permit requirements, source definition, etc.), you should contact the DNR [Bureau of Air Management](https://dnr.wisconsin.gov/departments/airmanagement) at 608/267-9500.

PROCESSORS/RE-REFINERS

The Wisconsin standards for processor/re-refiners (ch. NR 590 subchapter V) were drafted to be identical in substance to the Federal standards (40 CFR Part 279 Subpart F). A processor/re-refiner is required to:

- Obtain an EPA ID number and notify the Department of any activities concerning used oil.
- Maintain storage tanks and containers in good condition and labeled "used oil." In Wisconsin, the tank standards have been clarified by reference to the ILHR 10 regulations.
- Process and store used oil in areas with oil-impervious (sealed) flooring and secondary containment structures such as berms, ditches, or retaining walls.
- Clean up all used oil spills or leaks to the environment
- Prepare a plan and a schedule for testing used oil for halogen content.
- Track incoming used oil and outgoing recycled used oil products.
- Maintain records and file an annual report.
- Manage safely used oil processing and re-refining residues.
- Ensure that the facility is properly closed when recycling operations cease.

USED OIL FILTERS

Wisconsin's hazardous waste rules have been revised to add the EPA hazardous waste exclusion

for nonterne-plated used oil filters that are not mixed with listed hazardous waste and from which oil has been removed by proper hot-draining [NR 605.05(1)(v)].² WDNR requirements and policy are explained in the Recycle Used Motor Oil Filters fact sheet.

Non terne-plated oil filters that are not mixed with listed hazardous waste and from which oil has been removed do not appear to have the hazardous waste toxicity characteristic. As a result, they may be handled as solid waste, provided that they are gravity hot-drained using any one of the following methods:

- Puncturing the filter anti-drain back valve or the filter dome and hot-draining.
- Hot-draining and crushing.
- Dismantling and hot-draining.
- Any other equivalent hot-draining method which will adequately remove used oil.

Equivalent oil removal methods could include flushing filters with pressurized air and spinning oil-soaked filter paper media removed from filters. We recommend oil filter crushing or dismantling and recycling of the oil filter components (such as oil and steel) as the best management practice.

"Hot-draining" means draining the oil filter near engine operating temperature and above room temperature (i.e., 60 degrees F.) for at least 12 hours.

Terne is an alloy of tin and lead. Based on information submitted to EPA, terne-plated oil filters have the hazardous waste toxicity characteristic for lead. Unless specific testing indicates otherwise, oil filters that are known to be terne-plated must be managed as hazardous waste. The easiest way to determine if oil filters are terne-plated is to contact the specific manufacturer of the filter(s) in question. According to Filter Manufacturers Council (FMC), as of January 1, 1993, its members no longer produced terne-plated filters. FMC members reportedly produce 80 to 90 percent of the oil filters marketed in the U.S. Persons that remove used oil filters (other than consumers) should document how they determine whether or not the filters are terne-plated.

Oil filter haulers do not require a transportation license to bring filters to a place where they are recycled. Nor is a processor license required. However, storing oil filters for more than a week requires a solid waste storage license.

USE OF USED OIL FOR DUST SUPPRESSION

This practice has long been prohibited in Wisconsin. The federal used oil management regulations indicate that the use of used oil for dust suppression is allowed only in states which have obtained authorization from EPA to allow this practice.

MANAGEMENT OF USED OIL SPILLS

Introduction

Since January 1, 1991, the Wisconsin recycling law has banned the disposal of used oil in Wisconsin landfills and the burning of used oil in Wisconsin incinerators that do not recover energy [s. 287.07(1m), Stats.; Act 335, April 1990]. It is illegal to dispose of used oil by discharging it to land or waters of Wisconsin [s. NR 590.05(2)]. Provisions for management of

sorbent materials containing used oil

The Department's hierarchy in the management of solid waste is to first reduce the amount of waste generated with beneficial use or recycling being preferred to the burning or disposal of solid waste into landfills. The burning of certain wastes, such as used oil, to recover energy is typically considered recycling. Due to the statutory prohibition on disposal of used oil into landfills, the Department must give special care to situations where disposal of used oil is proposed. To reduce the need for these efforts, the Department has suggested the following options for used oil generators to consider that should reduce the need to landfill used oil or used oil sorbent materials:

- In cases of routine or systematic releases, the Department recommends improved maintenance to reduce or eliminate these releases.
- In cases where used oil is released, clean up the release using either a launderable sorbent material or a sorbent material that can be burned in an energy recovery unit along with the used oil that it absorbs.

However, the Department recognizes that in some cases, where oil has been spilled or released, available management options are limited. In those cases, care must still be given to the management of oil which is collected in sorbent material. Only in cases where other options are not available will disposal into a solid waste landfill of used oil contained in sorbent materials be allowed [s. NR 590.05(2)].

Section NR 590.05(2)(a) reads as follows:

NR 590.05(2)(a) No person may dispose of waste oil or material containing waste oil in a solid waste disposal facility, except as provided in par. (b).

(b) Material containing, or otherwise contaminated with, minimal amounts of oil from which the oil has been removed to the extent possible such that no visible signs of free flowing oil remain in or on the material, may be disposed of in a solid waste disposal facility, provided the material is not listed or identified as hazardous waste.

Note: The Department encourages the recycling of used oil including oil-soaked rags and similar materials, by the use of laundering services, burning for energy recovery and other recycling methods.

Note: Disposal of petroleum contaminated soil and materials into solid waste disposal facilities shall be done in accordance with the applicable provisions of chs. NR 419, 506 and 722.

(c) Oil drained or removed from materials containing or otherwise contaminated with oil is subject to regulation as used oil.

Note: The Department encourages that solid waste material from which oil is removed, such as used oil filters that have been drained in accordance with s. NR 605.05(1)(v), be recycled. If the material cannot be recycled, it should be properly characterized and disposed of in accordance with the requirements of chs. NR 500 to 520 and NR 600 to 685.

(d) No person may mix oil with other material for the purpose of avoiding the prohibition of s. 287.07(1m)(b) Stats.

Chapter NR 590 and the exemption in s. NR 605.05(1)(q) apply to used oil which is destined for recycling, not used oil which is disposed. The Federal regulations on which ch. NR 590 is based indicate that waste oils or oily wastes are not used oil.³ For this reason, and because oil which is disposed does not meet the presumption of recycling described under [WASTE MANAGEMENT REQUIREMENTS](#), these oily wastes are subject to the requirement that the generator perform a hazardous waste determination as is also described earlier.

Management of Inadvertent or Accidental Contained Spills

For inadvertent or accidental spills occurring in completely contained areas, such as concrete floors without floor drains or other containment devices for the purposes of capturing oil, the following management techniques are recommended.

1. Remove the oil to the greatest extent possible.
2. Apply sorbent material (such as rags, absorbent socks or pads, sawdust, ground corn, or other reusable or burnable material) in sufficient quantities to capture all free-flowing oil.
3. Spent sorbent material can be laundered or burned for energy recovery.

Routine oil spills and larger spills should be managed in the following way:

1. Remove liquid phase of used oil to the greatest extent possible and then apply sufficient sorbent material to capture remaining oil.
2. Have oil-contaminated spent sorbent material laundered or burned for energy recovery. Send the liquid phase off-site for recycling or re-refining.
3. Change practices, such as repairing or better maintaining equipment or machinery, or retraining workers, to prevent and minimize future spills.

Note: We strongly recommend that reusable sorbent material be wrung out to remove as much oil as possible prior to laundering. Oil removed by wringing should be properly contained and managed.

Note: If the oil or spent sorbent material will not be recycled, then the exemption in s. NR 605.05(1)(q), Wis. Adm. Code, does not apply and a hazardous waste determination must be made. If either the oil or the spent sorbent material are hazardous waste, then all applicable hazardous waste requirements must be followed. If the removed oil is determined to be nonhazardous waste, follow all applicable solid waste and used oil management requirements.

Uncontained Spills

Section NR 590.05(2) recognizes the fact that certain discharges of used oil, such as releases to the ground surface, are releases to the environment and thus trigger the spill response requirements of chs. NR 700 to 736 and remediation is needed. The NR 700 series regulations apply to these situations, rather than the language of s. NR 590.05(2).

In Wisconsin, any oil spill(s) that has impacted or may have the potential to impact the

environment must be reported to the Department. Spill reports can be made by calling your local DNR district office or, in an emergency, 24-hours-a-day to the Department of Emergency Government's toll-free number, 800/943-0003. For additional information on leaking underground storage tanks, tank closure, and/or spills response, obtain the Emergency and Remedial Response Section Publication Checklist from the attached order form.

Past WDNR guidance has stated that spills of one gallon or less may be disposed of in a solid waste landfill. Although the Department is not encouraging the disposal of oil into landfills, WDNR will allow for disposal of oil spills of greater than one gallon, provided approval is granted by the Department's area solid waste investigator or regional program supervisor for **each** incident.

While disposal of spills of more than one gallon may be approved, note also that recurring spills, even of one gallon or less, may be viewed as a management practice in violation of the statute. In addition, note that landfills may or may not choose to accept sorbents used to contain spills of used oil.

DISCLAIMER: This guidance is not intended as a substitute for the regulations and statutes that apply. Rather, it is a brief summary of the topic. Please consult the regulations and statutes for detailed information.

USED OIL PUBLICATIONS ORDER FORM

The following other publications on used oil are available:

[WA-101 EPA Identification Number](#)

[WA-137 Transporting Hazardous Waste](#)

IE-105 Recycle Used Oil

[WA-104 Used Oil Burning](#)

SW-135 Recycle Used Motor Oil Filters

SW-353 Listing of markets for used oil and used oil filters in Wisconsin

SW-392 Wisconsin Recycling Markets Directory Order Form

CO-199 Wisconsin's Waste Reduction and Environmental Assistance Publications Order Form

SW-504 Emergency and Remedial Response Section Publication Checklist (order form for leaking underground storage tank, tank closure, and spills response information)

To order these, use or copy this form and send, FAX or email to:

Clearinghouse Specialist FAX 608/267-0496

WI DNR CO/8 CEA@DNR.STATE.WI.US

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AVAILABILITY OF GRANTS

There are currently no state educational or collection grants specifically for used oil programs. However, for information on innovative demonstration grant possibilities pertaining to the recycling/reduction/reuse of used oil, oil filters, or sorbent materials, contact the DNR Bureau of Community Financial Assistance at 608/267-0496.

GOVERNMENT PROCUREMENT OF RE-REFINED OIL

State agencies are not currently required to purchase re-refined oil. Section 287.15(7), Stats. states:

All contracting agencies of the state shall be encouraged to purchase re-refined oil to be used as automotive engine oil if re-refined oil is available in sufficient supply of comparable quality, satisfies applicable American Petroleum Institute standards, and is available at prices competitive with new oil.

Wisconsin state agencies will be required to purchase re-refined oil when the performance and quality have been proven (Wisconsin Act 335, April 1990). For more information on re-refined oil purchasing requirements, contact Dan Wehrman of the Wisconsin Department of Administration at 608/267-6922.

Used Oil Management Requirements Summary

	Generator	Transporter/Transfer Facility	Processor/Re-refiner	Off-specification burner
	Subchapter III	Subchapter IV	Subchapter V	Subchapter VI
Storage in containers and aboveground tanks	Good condition	Good condition	Good condition	Good condition
Labels for tanks and containers	Yes	Yes	Yes	Yes
Secondary containment system (Oil impervious berm, dike, or retaining	No	Yes, for transfer facilities No, for transporters	Yes	Yes

wall and floor)				
Environmental release cleanup	Yes	Yes	Yes	Yes
EPA identification number & notification	No	Yes Transporter license required	Yes	Yes
Tracking	No	Acceptance and delivery records	Acceptance and delivery records	Acceptance records
Analysis	No, except information or testing if needed to rebut the hazardous waste mixing presumption	Yes, information and testing if needed to rebut the hazardous waste mixing presumption	Create and follow analysis plan that details how the hazardous waste mixing presumption will be rebutted	Yes, information or testing if needed to rebut the hazardous waste mixing presumption
Recordkeeping (for three years)	No	Yes, information or testing data if needed to rebut the hazardous waste mixing presumption, acceptance and delivery records	Yes, information or testing data if needed to rebut the hazardous waste mixing presumption, acceptance and delivery records	Yes, information or testing data if needed to rebut the hazardous waste mixing presumption, acceptance records
Preparedness and contingency plans	No	No	Yes, same as s. NR 630.22	No
Annual reporting	No	No	Yes	Yes

Unit closure	No	No	Yes, same as ss. NR 685.05 and 685.06	No
Dust suppression ban	Yes	Yes	Yes	Yes
Surface impoundment ban	Yes	Yes	Yes	Yes

¹See also 40 CFR ss.279.10(b)(1)(ii), 279.44, 279.44, 279.53 and 279.63

²57 FR 21534, May 20, 1992; 40 CFR s. 261.4(b)(13)

³EPA reasoned that the oil has never been "used" for its intended purpose/ See 50 FR 49174, November 29, 1985 and p. 3-10, EPA Used Oil Management Standards Training.

WA-233 97